

217/782-2113

JOINT CONSTRUCTION AND OPERATING PERMIT -- "REVISED"

PERMITTEE

ACH Food Companies, Inc.
Attn: Mark Radi
710 North Mathis Avenue
Champaign, Illinois 61821-2450

Application No.: 99020044
Applicant's Designation: CHAMPAIGN
Subject: Package Boilers
Date Issued: May 4, 2001

I.D. No.: 019802AAI
Date Received: February 27, 2001
Operating Permit Expiration
Date: April 22, 2004

Location: 710 North Mattis Avenue, Champaign

Permit is hereby granted to the above-designated Permittee to CONSTRUCT and OPERATE emission source(s) and/or air pollution control equipment consisting of three package boilers as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. Description

The boilers consist of three boilers that were installed at the source in 1999 and 2000 when three existing boilers were shut down. At that time, ACH also temporarily shut down two other boilers, permit number 72101069, but these boilers are now being returned to service. They will operate with these three boilers to produce process steam for the source.

When these boilers were originally installed, they were intended to operate as high pressure boilers as part of a cogeneration system with Trigen, Inc. (I.D. No. 019010AFL). The cogeneration project was not successful and the agreement between ACH Foods and Trigen was terminated in April 2000. ACH foods has acquired possession of the boilers and now converting the boilers to provide only low-pressure steam, as needed for process purposes, i.e., will no longer be producing electricity at the source. As a result, these boilers are no longer a significant source of NO_x emissions.

2. List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Date Constructed	Emission Control Equipment
Boiler #2	83 mmBtu/hr Natural Gas Fired with Residual Fuel Backup	Pre - 1989*	None
Boiler #3	83 mmBtu/hr Natural Gas Fired with Residual Fuel Backup	Pre - 1989*	None
Boiler #4	83 mmBtu/hr Natural Gas Fired with Residual Fuel Backup	Pre - 1989*	None

* Boiler moved and installed at the source in 1999 and 2000.

3. Applicability Provision and Applicable Regulations

- a. An "affected boiler" for the purpose of these unit-specific conditions, is each boiler listed in Condition 2.
- b. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 IAC 212.122, pursuant to 35 IAC 212.123(a), except as allowed by 35 IAC 212.123(b) and 212.124.
- c. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period to exceed 0.15 kg of particulate matter per MW-hr of actual heat input from any fuel combustion emission unit using liquid fuel exclusively (0.10 lbs/mmBtu) [35 IAC 212.206].
- d. No person shall cause or allow the emission of sulfur dioxide into the atmosphere in any one hour period from any existing fuel combustion emission source, burning liquid fuel exclusively to exceed 1.55 kg of sulfur dioxide per MW-hr of actual heat input when residual fuel oil is burned (1.0 lbs/mmBtu) [35 IAC 214.161(a)].
- e. No person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmBtu/hr) to exceed 200 ppm, corrected to 50 percent excess air [35 IAC 216.121].

4. Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected boilers not being subject to the New Source Performance Standards (NSPS) for Small Industrial-Commercial Institutional Steam Generating Units, 40 CFR 60 Subparts A and Dc, because the affected boilers were constructed, modified, or reconstructed before June 9, 1989, pursuant to 40 CFR 60.40c(a).
- b. As a consequence of the conditions in this permit, this permit is issued based on the affected boilers not constituting a major modification subject to Prevention of Significant Deterioration (PSD), 40 CFR 52.21. For this purpose, this permit does not rely upon the contemporaneous decreases in emissions that occurred when existing Boilers 2, 3, and 4 were shut down in 2000.

5. Operation and Production Limits and Work Practices

- a. Natural gas and residual fuel oils shall be the only fuels fired in the affected boilers.
- b. Natural gas and residual fuel usage by the affected boilers

shall not exceed the following:

- i. Natural gas usage shall not exceed 798 million scf per year in affected boilers.
- ii. Residual fuel oil usage shall not exceed 506,000 gallons per year.
- iii. If natural gas usage in affected boilers is more than 519.5 million scf/year, then the limitation on residual fuel oil usage shall be determined using the following equation:

$$Y = - 1.8182 X + 1450.9$$

Where:

Y = Fuel oil usage allowed in thousand gallons
X = Natural gas used in million scf.

- c. The sulfur content of the residual fuel oil used by the affected boilers shall not exceed 1.0 wt. %.

6. Emission Limitations

- a. Emissions from the affected boilers combined shall not exceed the following limits. These limits reflect the Permittee's commitment to maintain emissions of the boilers below the levels at which they would constitute a major modification, which is consistent with their expected manner of operation.

SO_2 (T/Mo) (T/Yr)		NO_x (T/Mo) (T/Yr)	
39.9	39.9	39.9	39.9

- b. Compliance with the annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).

7. Testing Requirements

None

8. Monitoring Requirements

None

9. Recordkeeping Requirements

- a. The Permittee shall maintain records of the following items for the affected boilers to demonstrate compliance with Conditions 5 and 6:
 - i. Natural gas usage for the affected boilers (scf/month and scf/year).

- ii. Residual fuel oil usage for the affected boilers
(gallon/month and gallon/year).

- iii. Sulfur content of the residual fuel oil (wt. %).
- iv. Emissions of NO_x and SO₂ from the affected boilers and from usage of natural gas and residual fuel oil combined (ton/month and ton/year).

10. Reporting Requirements

- a. The Permittee shall promptly notify the Illinois EPA (MC 40), Compliance Section, P.O. Box 19276, Springfield, IL 62794-9276 of noncompliance of the affected boilers with the permit requirements as follows. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:
 - i. Natural gas usage from the affected boilers in excess of the limits specified in Condition 5b.
 - ii. Residual fuel oil usage from the affected boilers in excess of the limits specified in Condition 5c.
 - iii. Sulfur content of the residual fuel oil in excess of the limit specified in Condition 5d.
 - iv. Emissions in excess of the limits specified in Condition 6a.
- b. The Permittee shall notify the Illinois EPA (MC 40), Compliance Section, P.O. Box 19276, Springfield, Illinois, 62794-9276 of the following dates:
 - i. The construction date of each affected boiler commenced postmarked no later than 30 days after such date.
 - ii. The anticipated date of initial startup of each affected boiler postmarked not more than 60 days nor less than 30 days prior to such date.
 - iii. The actual date of initial startup of each affected boiler postmarked within 15 days after such date.

11. Operational Flexibility/Anticipated Operating Scenarios

None

12. Compliance Procedures

- a. Compliance with Condition 3b, 3c, and 3e is considered to be assured by the normal work practices and maintenance activities inherent in operation of the affected boilers.
- b. Compliance with Condition 3d is considered to be assured by the use of residual fuel oil that meets the sulfur content limit of Condition 5d and by the recordkeeping requirement of

Condition 9a(iii).

- c. Compliance with the emission limits in Condition 6 shall be determined from the record required by this permit and the following emission factors and emission formulas listed below:

- i. A. Emission factors for the affected boilers when fired by natural gas:

<u>Pollutant</u>	<u>Emission Factor (lb/mmscf)</u>
NO _x	100.0
SO ₂	0.6

These are emission factors determined for the boilers using standard AP-42 emission factors for natural gas.

Appropriate Emissions (ton) = Natural Gas Consumed (mmscf) * The Appropriate Emission Factor (lb/mmscf)) 2,000 lb/ton

- ii. A. Emission factors for the affected boilers when fired by residual fuel oil:

<u>Pollutant</u>	<u>Emission Factor (lb/1000 gal)</u>
NO _x	55.5
SO ₂	157(S)

Where (S) is the Sulfur content of the residual fuel oil (wt. %)

These are emission factors determined for the boilers using standard AP-42 emission factors for residual fuel oil.

Appropriate Emissions (ton) = Residual Fuel Oil Consumed (1000 gal) * The Appropriate Emission Factor (lb/1000 gal)) 2,000 lb/ton

13. This permit supersedes the provisions of Construction Permit 99020044, as issued to Trigen, Inc., which addressed operation of these boilers as part of a cogeneration system.

It should be noted that this permit has been revised to allow Boilers 1 and 5 to continue to operate as these three boilers, which are now limited to production of low-pressure steam, are no longer allowed to operate at emission levels that would constitute a major modification in the absence of emission reduction from these existing boilers.

If you have any questions on this, please call Minesh Patel at 217/782-2113.

Donald E. Sutton, P.E.

Manager, Permit Section
Division of Air Pollution Control

DES:MVP:jar

cc: Region 2